1857 General

1967

T-VIII

TABLE 9

Analyses of 1961 Samples

Christenson and Thomas, 196

		Filt. Gross α c/m/ml	Milli-pore Filter Gross α c/m/ml	pH Un-filt./Filt	Phen. Alk.	Tot. Alk.	Total Hard-ness	Ca	Mg	Cl^-	NO_3^-	$SO_4^=$	Filt. Total Solids	Filt. Vol. Solids 400°C.	Filt. Vol. Solids 600°C.	F^-	Na	K	Surfc. Tension Dynes/cm	C.O.D.
Avg F	Wkly Raw Comp*	584		6.0/6.9	45	186	170	57	7	70	139	36	17,036	316	10,596	200	197	1245	54.5	73
Avg F	Comp. #6	48		11.0	714	1381	161	32	20	102	146	44	11,808		2,605	230	942	2927	42.3	322
Avg W		6		8.6	22	261	190	52	14	17	9	18	3,868	2,012	3,619	76	138	118	52.7	50
Avg T		24		9.7	329	759	177	43	17	66	70	29	7,338	2,012	3,168	144	494	1366	48.1	171
Avg F	Comp. #8	14		4.3	0	0	359	49	57	61	305	227	4,467	1,056	2,359	33	801	112	52.3	353
Avg W		14		6.4	0	175	510	64	84	77	356	272	6,286	1,912	4,048	36	1127	84	51.0	705
Avg T		14		5.5	0	97	443	57	72	70	333	252	5,477	1,769	3,297	34	982	96	51.6	548
Avg F	Comp. #10	28		4.3	0	0	1820	74	393	73	350	288	8,417	752	2,351	48	1878	271	52.2	273
Avg W		10		7.0	0	223	420	88	48	63	292	140	5,992	2,569	6,218	52	790	104	51.8	392
Avg T		18		5.8	0	124	1042	82	201	67	318	206	7,070	2,266	4,500	50	1273	156	52.0	339
Avg F	Comp. #12	9		9.2							290		7,504		2,940	220				
Avg W		6		8.9	440	1720	325	70	36	180	363	140	9,768	1,988	2,772	280				
Avg T		7		9.0	440	1720	325	70	36	180	345	140	8,636	1,988	2,856	265				
Avg F	Comp. #14	165	148	3.7	0	0	4161	344	793	1112	436	355	34,622	8,548	17,175	223	3620	1005	53.2	67
Avg W		126	108	4.0	0	0	4190	256	852	838	406	413	32,340	7,131	16,478	228	3825	1203	53.2	219
Avg T		143	122	3.8	0	0	4177	295	826	960	419	387	33,386	7,367	16,788	230	3734	1115	53.2	152
Avg F	Comp. #16	11		7.2	35	390	994	80	191	60	310	47	5,158	552	1,769	153	1005	709	51.5	136
Avg W		6		8.8	72	855	310	80	33	102	208	73	7,822	1,491	2,916	280	1099	2518	48.1	481
Avg T		8		8.1	56	648	614	80	99	83	253	61	6,637	1,335	2,406	223	1057	1714	48.5	271
Avg F	Comp. #18	79	70	3.8	0	0	7375	625	1395	1526	446	603	52,232	14,036	24,017	245	5900	1631	56.0	76
Avg W		36		5.4	0	84	3290	284	619	610	432	343	34,616	12,874	24,630	220	3274	1488	54.2	208
Avg T		55		4.7	0	47	5106	436	964	1017	438	460	42,445	13,068	24,357	231	4441	1551	54.8	158
Avg F	Comp. #20	6		4.7	0	15	2948	254	555	202	410	96	13,999	2,808	5,789	123	1610	477	53.2	52
Avg W		15		4.4	0	0	3580	346	653	132	419	167	20,013	5,213	9,647	228	2216	920	56.9	99
Avg T		11		4.5	0	7	3299	304	609	158	415	141	17,340	4,812	7,932	181	1989	747	55.5	81
Avg F	Comp. #22	8		3.9	0	0	6168	431	1186	370	464	543	40,733	11,152	18,541	245	4794	896	52.1	358
Avg W		10		3.9	0	0	5510	436	1061	212	470	341	34,127	11,097	18,770	280	3682	895	57.1	308
Avg T		9		3.9	0	0	5802	436	1116	282	467	431	37,083	11,106	18,680	264	4176	895	54.9	327
Avg F	Comp. #24	127	107	4.0	0	0	3103	244	598	160	433	399	20,958	3,968	8,565	173	3739	675	54.3	242
Avg W		47		4.7	0	13	3300	252	641	159	451	310	20,951	5,555	9,813	188	2643	853	53.3	470
Avg T		83		4.4	0	7	3212	248	622	160	459	350	20,956	5,289	9,289	181	3127	799	53.7	368
Avg F	Comp. #26	20		4.5	0	0	4775	348	939	204	463	342	31,430	7,120	15,268	240	3472	628	52.0	292
Avg W		4		4.5	0	2	4610	408	862	167	455	219	24,718	7,691	14,086	208	2642	704	57.5	201
Avg T		11		4.5	0	1	4683	380	896	181	459	266	27,718	7,596	14,612	222	2953	675	56.0	227
Avg F	Comp. #28	19		5.5	8	150	5470	229	1170	169	457	271	22,344	7,464	10,608	175	3083	371	55.1	302
Avg W		1		7.7	2	137	900	112	149	65	330	115	8,036	2,388	5,161	76	1008	1260	55.7	85
Avg T		9		6.7	4	143	2831	168	602	111	386	184	14,395	3,234	7,583	120	2391	851	55.3	253

CODE: F - Waste; W - Water; T - Total

*Unfilt. Gross α (c/m/ml) - 565; Unfilt. Tot. Solids - 5454;
Unfilt. Vol. Solids (400°C) - 396; Unfilt. Vol. Solids (600°C) - 1368

12069

TABLE 9

Analyses of 1961 Samples

Christenson and Thomas, 1962

		Filt. Gross α c/m/ml	Milli-pore Filter Gross α c/m/ml	pH Un-filt./Filt	Phen. Alk.	Tot. Alk.	Total Hard-ness	Ca	Mg	Cl^-	NO_3^-	$SO_4^=$	Filt. Total Solids	Filt. Vol. Solids 400°C.	Filt. Vol. Solids 600°C.	F^-	Na	K	Surfc. Tension Dynes/cm	C.O.D.
Avg F	Wkly Raw Comp*	584		6.0/6.9	45	186	170	57	7	70	139	36	17,036	316	10,596	200	197	1245	54.5	73
Avg F	Comp. #6	48		11.0	714	1381	161	32	20	102	146	44	11,808		2,605	230	942	2927	42.3	322
Avg W		6		8.6	22	261	190	52	14	17	9	18	3,868	2,012	3,619	76	138	118	52.7	50
Avg T		24		9.7	329	759	177	43	17	66	70	29	7,838	2,012	3,168	144	494	1366	48.1	171
Avg F	Comp. #8	14		4.3	0	0	359	49	57	61	305	227	4,467	1,056	2,359	33	801	112	52.3	353
Avg W		14		6.4	0	175	510	64	84	77	356	272	6,286	1,912	4,048	36	1127	84	51.0	705
Avg T		14		5.5	0	97	443	57	72	70	333	252	5,477	1,769	3,297	34	982	96	51.6	548
Avg F	Comp. #10	28		4.3	0	0	1820	74	393	73	350	288	8,417	752	2,351	48	1878	271	52.2	273
Avg W		10		7.0	0	223	420	88	48	63	292	140	5,992	2,569	6,218	52	790	104	51.8	392
Avg T		18		5.8	0	124	1042	82	201	67	318	206	7,070	2,266	4,500	50	1273	156	52.0	339
Avg F	Comp. #12	9		9.2							290		7,504		2,940	220				
Avg W		6		8.9	440	1720	325	70	36	180	363	140	9,768	1,988	2,772	280				
Avg T		7		9.0	440	1720	325	70	36	180	345	140	8,636	1,988	2,856	265				
Avg F	Comp. #14	165	148	3.7	0	0	4161	344	793	1112	436	355	34,622	8,548	17,175	233	3620	1005	53.2	67
Avg W		126	108	4.0	0	0	4190	256	852	838	406	413	32,340	7,131	16,478	228	3825	1203	53.2	219
Avg T		143	122	3.8	0	0	4177	295	826	960	419	387	33,386	7,367	16,788	230	3734	1115	53.2	152
Avg F	Comp. #16	11		7.2	35	390	994	80	191	60	310	47	5,156	552	1,769	153	1005	709	51.5	136
Avg W		6		8.8	72	855	310	80	33	102	208	73	7,822	1,491	2,916	280	1099	2518	46.1	461
Avg T		8		8.1	56	648	614	80	99	83	253	61	6,637	1,335	2,406	223	1057	1714	48.5	271
Avg F	Comp. #18	79	70	3.8	0	0	7375	625	1395	1526	446	603	52,232	14,036	24,017	245	5900	1631	56.0	76
Avg W		36		5.4	0	84	3290	284	619	610	432	343	34,616	12,874	24,630	220	3274	1488	54.2	208
Avg T		55		4.7	0	47	5106	436	964	1017	438	460	42,445	13,068	24,357	231	4441	1551	54.8	158
Avg F	Comp. #20	6		4.7	0	15	2948	254	555	202	410	96	13,999	2,808	5,789	123	1610	477	53.2	52
Avg W		15		4.4	0	0	3580	346	653	132	419	167	20,013	5,213	9,647	228	2216	920	56.9	99
Avg T		11		4.5	0	7	3299	304	609	158	415	141	17,340	4,812	7,932	181	1989	747	55.5	81
Avg F	Comp. #22	8		3.9	0	0	6168	431	1186	370	464	543	40,733	11,152	18,541	245	4794	896	52.1	358
Avg W		10		3.9	0	0	5510	436	1061	212	470	341	34,127	11,097	18,770	280	3682	895	57.1	308
Avg T		9		3.9	0	0	5802	436	1116	282	467	431	37,063	11,106	18,680	264	4176	895	54.9	327
Avg F	Comp. #24	127	107	4.0	0	0	3103	244	598	160	463	399	20,958	3,968	8,565	173	3729	675	54.3	242
Avg W		47		4.7	0	13	3300	252	641	159	451	310	20,951	5,553	9,813	188	2645	898	53.3	470
Avg T		83		4.4	0	7	3212	248	622	160	459	350	20,956	5,289	9,269	181	3127	799	53.7	368
Avg F	Comp. #26	20		4.5	0	0	4775	346	939	204	463	342	31,430	7,120	15,268	240	3472	628	52.0	291
Avg W		4		4.5	0	2	4610	408	862	167	455	219	24,718	7,691	14,086	208	2642	704	57.5	201
Avg T		11		4.5	0	1	4683	380	896	181	459	266	27,718	7,596	14,612	222	2953	675	56.0	227
Avg F	Comp. #28	19		5.5	8	150	5470	239	1170	169	457	271	22,344	7,464	10,608	175	3083	371	55.1	302
Avg W		1		7.7	2	137	900	112	149	65	330	115	8,036	2,388	5,161	76	1008	1260	55.7	85
Avg T		9		6.7	4	143	2931	168	602	111	386	184	14,395	3,234	7,583	120	2391	851	55.3	258

CODE: F = Waste; W = Water; T = Total

*Unfilt. Gross α (c/m/ml) - 565; Unfilt. Tot. Solids - 5454; Unfilt. Vol. Solids (400°C) - 396; Unfilt. Vol. Solids (600°C) - 1268

TABLE 9

TABLE 7 Analyses of 1961 Samples

		Filt. Gross α c/m/ml	Milli-pore Filter Gross α c/m/ml	pH Un-filt./Filt	Phen. Alk.	Tot. Alk.	Total Hard-ness	Ca	Mg	Cl^-	NO_3^-	$SO_4^=$	Filt. Total Solids	Filt. Vol. Solids 400°C.	Filt. Vol. Solids 600°C.	F^-	Na	K	Surfc. Tension Dynes/cm	C.O.D.
Avg F	Wkly Raw Comp*	584		6.0/6.9	45	186	170	57	7	70	139	36	17,036	316	10,596	200	197	1245	54.5	73
Avg F	Comp. #6	48		11.0	714	1381	161	32	20	102	146	44	11,808		2,605	230	942	2927	42.3	322
Avg W		6		8.6	22	261	190	52	14	17	9	18	3,868	2,012	3,619	76	138	118	52.7	50
Avg T		24		9.7	329	759	177	43	17	66	70	29	7,838	2,012	3,168	144	494	1366	48.1	171
Avg F	Comp. #8	14		4.3	0	0	359	49	57	61	305	227	4,467	1,056	2,359	33	801	112	52.3	353
Avg W		14		6.4	0	175	510	64	84	77	356	272	6,286	1,912	4,048	36	1127	84	51.0	705
Avg T		14		5.5	0	97	443	57	72	70	333	252	5,477	1,769	3,297	34	982	96	51.6	548
Avg F	Comp. #10	28		4.3	0	0	1820	74	393	73	350	288	8,417	752	2,351	48	1878	271	52.2	273
Avg W		10		7.0	0	223	420	88	48	63	292	140	5,992	2,569	6,218	52	790	104	51.8	392
Avg T		18		5.8	0	124	1042	82	201	67	318	206	7,070	2,266	4,500	50	1273	156	52.0	339
Avg F	Comp. #12	9		9.2							290		7,504		2,940	220				
Avg W		6		8.9	440	1720	325	70	36	180	363	140	9,768	1,988	2,772	280				
Avg T		7		9.0	440	1720	325	70	36	180	345	140	8,636	1,988	2,856	265				
Avg F	Comp. #14	165	148	3.7	0	0	4161	344	793	1112	436	355	34,622	8,548	17,175	233	3620	1005	53.2	67
Avg W		126	108	4.0	0	0	4190	256	852	838	406	413	32,340	7,131	16,478	228	3825	1203	53.2	219
Avg T		143	122	3.8	0	0	4177	295	826	960	419	387	33,386	7,367	16,788	230	3734	1115	53.2	152
Avg F	Comp. #16	11		7.2	35	390	994	80	191	60	310	47	5,156	552	1,769	153	1005	709	51.5	136
Avg W		6		8.8	72	855	310	80	33	102	208	73	7,822	1,491	2,916	280	1099	2518	46.1	461
Avg T		8		8.1	56	648	614	80	99	83	253	61	6,637	1,335	2,406	223	1057	1714	48.5	271
Avg F	Comp. #18	79	70	3.8	0	0	7375	625	1395	1526	446	603	52,232	14,036	24,017	245	5900	1631	56.0	76
Avg W		36		5.4	0	84	3290	284	619	610	432	343	34,616	12,874	24,630	220	3274	1488	54.2	208
Avg T		55		4.7	0	47	5106	436	964	1017	438	460	42,445	13,068	24,357	231	4441	1551	54.8	158
Avg F	Comp. #20	6		4.7	0	15	2948	254	555	202	410	96	13,999	2,808	5,789	123	1610	477	53.2	52
Avg W		15		4.4	0	0	3580	346	653	132	419	167	20,013	5,213	9,647	228	2216	920	56.9	99
Avg T		11		4.5	0	7	3299	304	609	158	415	141	17,340	4,812	7,932	181	1989	747	55.5	81
Avg F	Comp. #22	8		3.9	0	0	6168	431	1186	370	464	543	40,733	11,152	18,541	245	4794	896	52.1	358
Avg W		10		3.9	0	0	5510	436	1061	212	470	341	34,127	11,097	18,770	280	3682	895	57.1	308
Avg T		9		3.9	0	0	5802	436	1116	282	467	431	37,063	11,106	18,680	264	4176	895	54.9	327
Avg F	Comp. #24	127	107	4.0	0	0	3103	244	598	160	468	399	20,958	3,968	8,565	173	3729	675	54.3	242
Avg W		47		4.7	0	13	3300	252	641	159	451	310	20,951	5,553	9,813	188	2645	898	53.3	470
Avg T		83		4.4	0	7	3212	248	622	160	459	350	20,956	5,289	9,269	181	3127	799	53.7	368
Avg F	Comp. #26	20		4.5	0	0	4775	346	939	204	463	342	31,430	7,120	15,268	240	3472	628	52.0	291
Avg W		4		4.5	0	2	4610	408	862	167	455	219	24,748	7,691	14,086	208	2642	704	57.5	201
Avg T		11		4.5	0	1	4683	380	896	181	459	266	27,718	7,596	14,612	222	2953	675	56.0	227
Avg F	Comp. #28	19		5.5	8	150	5470	239	1170	169	457	271	22,344	7,464	10,608	175	3083	371	55.1	302
Avg W		1		7.7	2	137	900	112	149	65	330	115	8,036	2,388	5,161	76	1008	1260	55.7	85
Avg T		9		6.7	4	143	2931	168	602	111	386	184	14,395	3,234	7,583	120	2391	851	55.3	258

CODE: F = Waste; W = Water; T = Total

*Unfilt. Gross α (c/m/ml) - 565; Unfilt. Tot. Solids - 5454; Unfilt. Vol. Solids (400°C) - 396; Unfilt. Vol. Solids (600°C) - 1368

TABLE 10 -- Moisture content of tuff adjacent to test holes

DPW-1				DPW-2				DPW-5			
Depth (feet)	Percent Moisture (by volume)			Depth (feet)	Percent Moisture (by volume)			Depth (feet)	Percent Moisture (by volume)		
	3-17-61	8-23-61	1-30-67		3-18-61	8-23-61	1-30-67		3-19-61	8-25-61	1-30-67
1	22	28	34	1	26	34	39	1	20	20	36
5	24	34	37	4	25	38	40	5	16	16	26
8	18	38	39	8	30	24	30	10	19	20	26
12	13	40	22	12	25	>50	30	15	20	25	29
16	14	34	22	16	22	>50	28	20	17	22	25
20	16	35	40	20	16	>50	18	25	13	19	18
24	18	30	34	24	24	>50	28	30	12	16	15
28	16	27	36	28	25	>50	>50	35	13	18	20
32	28	36	39	32	22	>50	>50	40	13	20	18
36	18	29	41	36	20	>50	47	45	11	16	16
40	14	23	41	40	10	44	16	50	13	21	20
44	14	27	36	44	10	46	16	55	12	19	20
48	14	29	30	48	10	42	17	60	12	14	16
52	16	34	30	52	12	44	22	65	12	15	17
56	14	28	19	56	14	40	25				
60	13	23	16	60	15	28	22				
64	13	22	26	64	12	24	17				

Note: Water level DPW-1A 1-30-67 24.2 feet
Water level DPW-3 1-30-67 50.3 feet
DPW-4 Destroyed
Depth of DPW-a, 76 ft; DPW-2, 93 ft; DPW-5, 92 ft.
Logging length of cable - 65 feet in 1967.

TABLE 10 -- Moisture content of tuff adjacent to test holes

DPW-1			
Depth (feet)	Percent Moisture (by volume) 3-17-61	8-23-61	1-30-67
1	22	28	34
5	24	34	37
8	18	38	39
12	13	40	22
16	14	34	22
20	16	35	40
24	18	30	34
28	16	27	36
32	28	36	39
36	18	29	41
40	14	23	41
44	14	27	36
48	14	29	30
52	16	34	30
56	14	28	19
60	13	23	16
64	13	22	26

DPW-2			
Depth (feet)	Percent Moisture (by volume) 3-18-61	8-23-61	1-30-67
1	26	34	39
4	25	38	40
8	30	24	30
12	25	>50	30
16	22	>50	28
20	16	>50	18
24	24	>50	28
28	25	>50	>50
32	22	>50	>50
36	20	>50	47
40	10	44	16
44	10	46	16
48	10	42	17
52	12	44	22
56	14	40	25
60	15	28	22
64	12	24	17

DPW-5			
Depth (feet)	Percent Moisture (by volume) 3-19-61	8-25-61	1-30-67
1	20	20	36
5	16	16	26
10	19	20	26
15	20	25	29
20	17	22	25
25	13	19	18
30	12	16	15
35	13	18	20
40	13	20	18
45	11	16	16
50	13	21	20
55	12	19	20
60	12	14	16
65	12	15	17

Note: Water level DPW-1A 1-30-67 24.2 feet
Water level DPW-3 1-30-67 50.3 feet
DPW-4 Destroyed
Depth of DPW-a, 76 ft; DPW-2, 93 ft; DPW-5, 92 ft.
Logging length of cable - 65 feet in 1967.

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TABLE 10

Table 3.--Moisture content of tuff adjacent to test holes

DPW-1				DPW-2				DPW-5			
Depth (feet)	Percent Moisture (by volume)			Depth (feet)	Percent Moisture (by volume)			Depth (feet)	Percent Moisture (by volume)		
	3-17-61	8-23-61	1-30-67		3-18-61	8-23-61	1-30-67		3-19-61	8-25-61	1-30-67
1	22	28	34	1	26	34	39	1	20	20	36
5	24	34	37	4	25	38	40	5	16	16	26
8	18	38	39	8	30	24	30	10	19	20	26
12	13	40	22	12	25	>50	30	15	20	25	29
16	14	34	22	16	22	>50	28	20	17	22	25
20	16	35	40	20	16	>50	18	25	13	19	18
24	18	30	34	24	24	>50	28	30	12	16	15
28	16	27	36	28	25	>50	>50	35	13	18	20
32	28	36	39	32	22	>50	>50	40	13	20	18
36	18	29	41	36	20	>50	47	45	11	16	16
40	14	23	41	40	10	44	16	50	13	21	20
44	14	27	36	44	10	46	16	55	12	19	20
48	14	29	30	48	10	42	17	60	12	14	16
52	16	34	30	52	12	44	22	65	12	15	17
56	14	28	19	56	14	40	25				
60	13	23	16	60	15	28	22				
64	13	22	26	64	12	24	17				

Note: Water level DPW-1A 1-30-67 24.2 feet
Water level DPW-3 1-30-67 50.3 feet
DPW-4 Destroyed
Depth of DPW-a, 76 ft; DPW-2, 93 ft; DPW-5, 92 ft.
Logging length of cable - 65 feet in 1967.

Purtymun, 1967